



SMS Text-to-9-1-1 Implementation Plan and Planning Kit

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Webinar
March 31, 2015



Introduction

- Overview of SMS Text-to-9-1-1
- SMS Text-to-9-1-1 Implementation Guide
- SMS Text-to-9-1-1 Planning Kit
- Importance of Collaboration, Communication, and Education
- Additional Resources



SMS Text-to-9-1-1

- Also known as **Interim Text-to-9-1-1** or **Interim SMS Text-to-9-1-1**
- Why “Interim”?
 - SMS Text-to-9-1-1 only supports text messages via carrier native Short Message Service (SMS).
 - Does not support multimedia which are sent by Multimedia Messaging Service (MMS)



Background

- August 8, 2014: Federal Communications Commission (FCC) adopted the Second Report and Order and Third Further Notice of Proposed Rulemaking (FCC 14-118)
 - Requires all wireless carriers to be prepared to support SMS text-to-9-1-1 by Dec. 31, 2014.
 - Commercial Mobile Service Providers (CMSPs) have six months to deploy text-to-9-1-1 at the PSAP from the time a PSAP requests text-to-9-1-1



Virginia and SMS Text-to-9-1-1

- E9-1-1 Services Board created the Text-to-9-1-1 Subcommittee
- Text-to-9-1-1 Subcommittee met 4 times in 2014 to discuss text-to-9-1-1 in Virginia
 - Had various presentations from PSAPs' deployment experiences to deaf & hard of hearing community's benefits to having this technology readily available.
 - Discussed what is best for Virginia's PSAPs



Virginia and SMS Text-to-9-1-1

- Subcommittee recommended the web browser solution using an aggregator.
- Subcommittee asked for a whitepaper
 - Approved by the Board in Jan. 2015.
- Subcommittee asked for the creation of an Implementation Guide for PSAPs that are interested in implementing text-to-9-1-1
 - Need for a guidance resource
 - More PSAPs indicating interest in implementation



SMS Text-to-9-1-1

- Three SMS text-to-9-1-1 solutions
 - Web browser with Internet access - recommended
 - Use of a text aggregator also recommended
 - Direct IP
 - TDD/TTY over standard PSAP trunks



Guide and Planning Kit

- Two Items
 - SMS Text-to-9-1-1 Implementation Guide
 - SMS Text-to-9-1-1 Planning Kit
- Goal: To be a resource for Virginia's PSAPs to use to plan for and implement text-to-9-1-1



Implementation Guide

- Briefly describes SMS text-to-9-1-1 and the options available for deployment for PSAPs
- Contains checklist for web browser based with Internet access solution.
- Contains a compilation of information pertaining to text-to-9-1-1 implementation from various sources.
 - i.e., APCO, FCC, NENA, and VITA



Implementation Guide

- Refers to the SMS Text-to-9-1-1 Planning Kit.
- Resources for additional reading



SMS Text-to-9-1-1 Planning Kit

- Goal: To save time for PSAPs that are interested in implementing text-to-9-1-1
- Contains templates, forms, a checklist, and informational material
 - Compiled from various resources such as the FCC, APCO, and NENA
- Ten kit items
- Organized in order with informational resource documents at the end



Planning Kit Contents

- PK1. **SMS Text-to-9-1-1 Implementation Planning Checklist for web-based solution:** From NENA's *Interim SMS Text-to-9-1-1 Information and Planning Guide*.
- PK2. **Request for Service Letter:** TEMPLATE letter for the PSAP to send to each CMSP. Source: NENA
- PK3. **Commercial Mobile Service Provider (CMSP) Contact List:** Contact information of the four major wireless carriers—AT&T, Sprint, T-Mobile, and Verizon. Source: NENA
- PK4. **SMS Text-to-9-1-1 Questionnaire:** PSAP completes and sends to each CMSP. Source: NENA
- PK5. **Information to be supplied by Public Safety and Guidelines for PSAPs or 9-1-1 Authorities:** Source: APCO
- PK6. **Text-to-9-1-1 Readiness and Certification Form:** Instructions and form to be sent to the FCC as soon as text-to-9-1-1 is deployed at the locality. Source: FCC
- PK7. **SMS Text-to-9-1-1 Status Change Notification E-mail:** Instructions along with TEMPLATE message that PSAP copies/pastes in an e-mail to the FCC.
- PK8. **NENA's FAQ's for Interim Text-to-9-1-1 Solution** (Informational)
- PK9. **APCO's Interim SMS Text-to-9-1-1 Information and Planning Guide** (Informational)
- PK10. **Virginia Text-to-9-1-1 Whitepaper** (Informational)



PK1: Checklist

√	TASK DESCRIPTION	RESPONSIBILITY		
		TCC	CMSP	PSAP
1 - Initial Service Request				
	1.1 - PSAP requests service from each CMSP Template letter and CMSP contact list in planning kit PK2, PK3	I	I	O
	1.4 - PSAP completes questionnaire for each CMSP Sample questionnaire: PK4			O
	1.2 - CMSP acknowledgement of service request		O	
2 - Project Kick-Off				
	2.1 - Confirm details from questionnaire	I	O	
	2.2 - Obtain PSAP Admin Contact	O		I
	2.3 - Obtain PSAP boundaries	O		I
	2.4 - Obtain PSAP IP Address	O		I
	2.5 - Obtain liability letter from PSAP PSAP must verify or provide the PSAP boundary information and sign an end user license agreement. Appendix E from the National SMS Text-to-9-1-1 Service Coordination Group describes information that the PSAP needs to supply: PK5	I		O
3 - Configure TCC Network				
	3.1 - Provision PSAP in Text Control Center (TCC)	O		I

PSAP action items highlighted

Reference to items in the planning kit

O=Owner of task item

I=Involved in task item

Source: NENA



PK2: Request for Service Letter

Appendix D

Request for Service letter

.....

{9-1-1 Authority Letterhead}

Date:

[CMSP Contact Name]
[CMSP Contact Title]
[CMSP Name]
[CMSP Street Address]
[CMSP City, State & Zip]

Dear _____:

The ___[Requesting Entity]___ hereby formally requests and authorizes [CMSP Name] to provide SMS to 9-1-1 based on other emergency communications service as defined in 47 USC 615.b. (9)(B). The Public Safety Answering Point(s) to be deployed is/are:

___[PSAP Name]	[FCC PSAP ID] ¹	[PSAP Location]___
___[PSAP Name]	[FCC PSAP ID]	[PSAP Location]___
___[PSAP Name]	[FCC PSAP ID]	[PSAP Location]___

Please begin deployment activities upon receipt of this letter. Your point of contact will be:

Mr./Ms. _____
Title: _____
Address: _____
Email: _____
Phone: _____

Regards,

[9-1-1 Authority signature]

TEMPLATE request for service letter to CMSP

Source: NENA



PK3: CMSP Contacts

Requests for Service: AT&T Mobility

Chief E9-1-1 Compliance Officer
P.O. Box 97061
Redmond, WA 98073-9761

Info contact: Allen Muse, ENP
Public Safety Relations Manager
AT&T Mobility
Tel. (615) 661-3388
Mobile: (615) 828-3099
Email: allen.muse@att.com

Sprint contact for Requests for Service:

INTRADO
Attn: Sprint Text-to-911
C/O: Dan Neu
PO BOX 999
LONGMONT CO 80502

Or Scanned & Signed Requests are accepted at: Sprint.PCS@intrado.com

T-Mobile

Lynn Mell
Senior Manager of Regulatory Affairs
9-1-1 Regulatory Team
T-Mobile USA, Inc.
425-383-4898 (Direct)
425-246-3758 (Mobile Phone)
12920 SE 38th Street; Bellevue, WA 98006
lynn.mell@T-Mobile.com

Verizon Wireless

Peter McHale, ENP
Verizon Wireless
1120 Sanctuary Parkway, Suite 150
Alpharetta, GA 30009
peter.mchale@vzw.com
770-797-1226

Contact information of the 4 major wireless carriers: AT&T, Sprint, T-Mobile, and Verizon

Source: NENA



PK4: Carrier Questionnaire

Appendix C

Carrier questionnaire

Questionnaire that goes to each of the carriers.

SMS to 9-1-1 PSAP Readiness Questionnaire	
Please fill out & return to:	
[Carrier Contact Name] _____	
[Carrier Contact Address] _____	
Name of PSAP	
PSAP FCC ID	
Contact info:	
Street	
Street	
City	
State	
ZIP	
PSAP Primary Point of Contact:	
First Name	
Last Name	
Desk Phone	

Source: NENA



PK5: Info Needed from PSAPs

Appendix E

Information to be supplied by Public Safety, and Guidelines for PSAPs or 9-1-1 Authorities
(taken largely from ATIS material – see note below)

Beyond the information in the questionnaire (Appendix C), routing information is required:

When a PSAP or 9-1-1 Authority deploys SMS to 9-1-1, they must provide the wireless operator (and the TCC provider) with the coverage area that will be accepting SMS to 9-1-1 messages. That process can be similar to (or the same as) the method used to provide wireless Phase II information.

Background

PSAP boundaries, in the form of polygons, are provisioned in the (TCC) Routing Server (RS). Then, routing information (e.g., Route URI) is assigned to each polygon.

Although J-STD-110 [Ref 1] and the associated Supplement A [Ref 2] enable the RS to be queried with either civic or geodetic location, only a geodetic location will be used in the query from the TCC for the interim SMS to 9-1-1 solution. When the RS receives a routable location (either coarse or a more refined location) and a services urn (urn:service:sos), it correlates the location with one of the provisioned polygons and returns the Route URI associated with that polygon. That URI allows the TCC to determine the type of PSAP and to set up a dialogue with that PSAP. If inter-TCC communication is invoked, the URI allows the originating TCC to determine the terminating TCC, and the URI retrieved in the terminating TCC will determine the type of PSAP.

If the RS cannot correlate the location with a provisioned polygon, it returns an error. This allows the TCC to generate a bounce-back message indicating service not available. If inter-TCC communication has been invoked, and the Terminating TCC receives an error indication from the RS it notifies the Originating TCC, which generates a bounce-back message.

Guidelines for PSAPs or 9-1-1 Authorities

It is primarily the responsibility of PSAPs, 9-1-1 Authorities, and NENA to develop implementation guidelines that impact PSAP operations. However, the following subset of implementation guidelines

Document describes the information that needs to be supplied by public safety. Also provides guidelines for PSAP

i.e., PSAP coverage area, guidelines and responsibilities of telecommunicators and the PSAP pertaining to a SMS text-to-9-1-1 session.

Source: APCO



PK6: FCC Text-to-911 Certification



PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: <http://www.fcc.gov>
TTY: 1-888-835-5322

DA 14-1905

Release Date: December 30, 2014

PUBLIC SAFETY AND HOMELAND SECURITY BUREAU ANNOUNCES AVAILABILITY OF PSAP TEXT-TO-911 CERTIFICATION AND READINESS FORM

PS Docket Nos. 10-255 and 11-153

By this *Public Notice*, the Public Safety and Homeland Security Bureau (Bureau) provides certification and registration instructions for Public Safety Answering Points (PSAPs) that seek to request delivery of text-to-911 service from Commercial Mobile Radio Service (CMRS) providers and other providers of interconnected text messaging services (collectively, “covered text providers”).

On August 13, 2014, the Commission adopted rules to commence the implementation of text-to-911 service and established an initial deadline of December 31, 2014 for all covered text providers to be capable of supporting text-to-911 service.¹ The text-to-911 rules provide that covered text providers must begin routing 911 text messages to requesting PSAPs by June 30, 2015 or within six months of a valid PSAP request, whichever is later. To constitute a “valid PSAP request,” (1) the PSAP must certify that it is technically ready to receive 911 text messages in the format requested; (2) the appropriate local or State 911 service governing authority must have authorized the PSAP to accept and, by extension, the covered text provider to provide, text-to-911 service; and (3) the requesting PSAP must notify the covered text provider that it is both technically ready to receive 911 text messages and has been authorized to accept such messages.²

At the Commission’s direction, the Bureau will maintain a centralized database that will list those PSAPs that have registered and certified their readiness to receive texts to 911, and will list the date of each PSAP’s request.³ PSAPs that wish to register in the database should follow the instructions set forth below. PSAPs that began accepting texts prior to December 31, 2014 and that were listed on the Bureau’s

FCC’s Text-to-9-1-1 Certification and Readiness form that PSAP needs to complete once text-to-9-1-1 has been deployed.

Source: FCC



PK7: Status Change Steps/Template

1. Use the **Text-to-9-1-1 Readiness and Certification Form** from the kit or go to <http://www.fcc.gov/encyclopedia/psap-text-911-readiness-and-certification> and download the form.
2. Fill out the form. The form requests the following information:
 - o Date of submission;
 - o Name and contact information of person submitting the form;
 - o PSAP facility information, including FCC-issued PSAP ID number, long-form name of facility, physical address, and county of operation;
 - o PSAP point of contact information for Text-to-911 coordination;
 - o PSAP method to receive texts (*e.g.*, Text-to-TTY, Web Browser, Direct IP or other method);
 - o Identification of the authorizing state or local entity; and
 - o Certification that PSAP is technically ready to receive texts.
3. Email the completed form to: **T911PSAPREGISTRY@fcc.gov** and copy Lewis Cassada with VITA (lewis.cassada@vita.virginia.gov).

Please contact the FCC with any questions. Contact information is on their web site at <http://www.fcc.gov/encyclopedia/psap-text-911-readiness-and-certification>

E-mail Template

To: **T911PSAPREGISTRY@fcc.gov**, **CC:** lewis.cassada@vita.virginia.gov

Attachment: Text-to-9-1-1 Readiness and Certification Form

Hello,

Please find attached the completed **Text-to-9-1-1 Readiness and Certification Form** from [PSAP NAME] in Virginia.

[SENDER'S NAME and SIGNATURE BLOCK]

Status change instructions: How to complete FCC Text-to-9-1-1 Readiness and Certification Form

E-mail TEMPLATE may be used to send with form attachment to FCC

Source: FCC



PK8: NENA's FAQ's (Info)



FAQ for Interim Text-to-9-1-1 Solution

Purpose: The purpose of this document is to provide additional information to 9-1-1 authorities/PSAPs when deciding when and how to accept interim solution SMS text-to-9-1-1 calls. This document is intended as a companion to the *SMS Text-to-9-1-1 PSAP Considerations* document; it is not intended to be a detailed instruction manual on how to implement or handle text-to-9-1-1 calls.

Each 9-1-1 authority/PSAP will need to consult with their wireless texting providers on the solutions offered for texting to ensure the proper solution is selected for their PSAP(s). The deployment of text-to-9-1-1 will vary from jurisdiction to jurisdiction, much like wireless deployment. Also, depending on the texting solution chosen, the texting capabilities may differ. The answers below are intended as guidance to some of the frequent questions the committee has received in relation to texting-to-9-1-1.

OVERVIEW OF SOLUTION

The interim text-to-9-1-1 solution will be for the most commonly utilized texting technology, Short Message Service (SMS), texting only. The interim solution will have three options in order to allow PSAPs that have not begun deploying NG9-1-1 services the capability to receive text messages.

Text to TTY/TDD – this option will allow the PSAP to receive incoming text messages via their current TTY/TDD system. The text would display on the 9-1-1 equipment exactly like a TTY call. A proposal has been made to deliver a different class of service that would allow the calltaker to differentiate between a TTY call and a text-to-9-1-1. The Automatic Location Information (ALI) display will show the caller's text number in the location where the wireless caller's Call Back Number is displayed on voice calls, and the x/y coordinates of the cell site centroid where the person is texting. The text messages will be delivered via the existing 9-1-1 trunks, which would mean that once a text came in via this method the 9-1-1 trunk would be tied up and unable to accept another call or text session.

Web Portal – this solution would require a PSAP to have internet access. A separate web portal would be opened at the beginning of the shift and would need to be monitored for incoming text messages. This solution currently requires a separate monitor for the web portal; however, some equipment manufacturers are working to incorporate the portal into the 9-1-1 display. The ALI will display the number associated with the device used for texting, and x/y coordinates of the cell site centroid of the person texting.

List of frequently asked questions when implementing text-to-9-1-1 at the PSAP

Source: NENA



PK9: APCO's Planning Guide (Info)

Interim SMS Text-to-9-1-1 Information and Planning Guide

Version 2 May 2014

Produced by the Ad Hoc National SMS Text-to-9-1-1 Service Coordination Group (SCG)

(see Appendix A for SCG purpose and list of stakeholder organizations)

ABSTRACT

The purpose of this Guide is to provide a detailed overview of the Interim SMS text-to-9-1-1 solution. The document describes the service, areas of consideration for Public Safety, and related planning and implementation recommendations. Portions of this document have been adopted from multiple sources, including early adopters.

Target audience: Public Safety management (9-1-1 Authorities and PSAP managers)

Introduction

The interim text-to-9-1-1 solution will utilize the most commonly available texting technology, carrier native Short Message Service (SMS) texting. Carrier native SMS is that feature provided by the carrier, and not a third party texting or messaging application (app) that may be installed on the mobile device. The SMS interim text-to-9-1-1 service provides support for wireless subscribers to send 9-1-1 SMS text messages to PSAPs and for subscribers to receive text replies from PSAPs. Wireless customers with SMS service are able to send emergency SMS messages to a PSAP by using the single code "911" as the destination address of the SMS message.

According to the National Organization on Disability (2007), there are an estimated 54 million individuals with a disability in the United States, which has a total population of more than 300 million. Over 37 million

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APCO's Comprehensive Interim SMS Text-to-9-1-1 Information and Planning Guide

Source: APCO



PK10: VITA's Whitepaper (Info)

Introduction

Text-to-9-1-1 is no longer a capability that is on the horizon; it has become part of our 9-1-1 reality. At present, there have been only six deployments in Virginia, but many Public Safety Answering Points (PSAPs) have expressed a strong interest in providing Text-to-9-1-1 service to their citizens and are moving forward to deploy this technology. Like the deployment of wireless E-911, the Commonwealth needs a comprehensive strategy for the deployment of Text-to-9-1-1 to ensure ubiquitous service. To this end, the E-911 Services Board (the "Board") established a Text-to-9-1-1 Subcommittee (the "Subcommittee") to evaluate the feasibility of texting to 9-1-1 as a statewide initiative. This white paper is the final report of that Subcommittee to the Board proposing the following goal and supporting recommendations.

Goal: Establish ubiquitous Text-to-9-1-1 service in the Commonwealth

The Subcommittee recommends that the Commonwealth take all steps necessary to ensure that Text-to-9-1-1 service is available universally to all citizens throughout the state. It will require strong centralized leadership and Board action to make this goal a reality. To achieve this, the Subcommittee is recommending the following:

- **Encourage the pursuit of web browser Text-to-9-1-1 solutions**

A base standard of service is needed as a foundation as the Commonwealth moves towards statewide deployment. The Subcommittee recommends that this baseline be a web browser Text-to-9-1-1 solution (described below). While this will just be an interim solution, it provides the best solution available to the Commonwealth at this time and the greatest flexibility to support future messaging capabilities. Basic web browser solutions are currently available to PSAPs at no cost; however, if any direct funding is provided by the Board for enhanced solutions (such as a text aggregator, which is described below), it should be contingent upon a PSAP pursuing this base standard.

- **Leverage text aggregator solutions for statewide deployment**

The Subcommittee recommends that text aggregators be leveraged to speed statewide deployment and enhance operations. These solutions provide necessary enhanced capabilities such as a single web user interface and, more importantly, the ability to transfer text message sessions among PSAPs with diverse equipment. The ability to transfer text sessions among PSAPs is a key feature for larger metropolitan based PSAPs. Although texting is a service that is primarily offered by wireless service providers, a

VITA's Text-to-9-1-1 Whitepaper from January 2015

Source: VITA



Collaboration and Communication

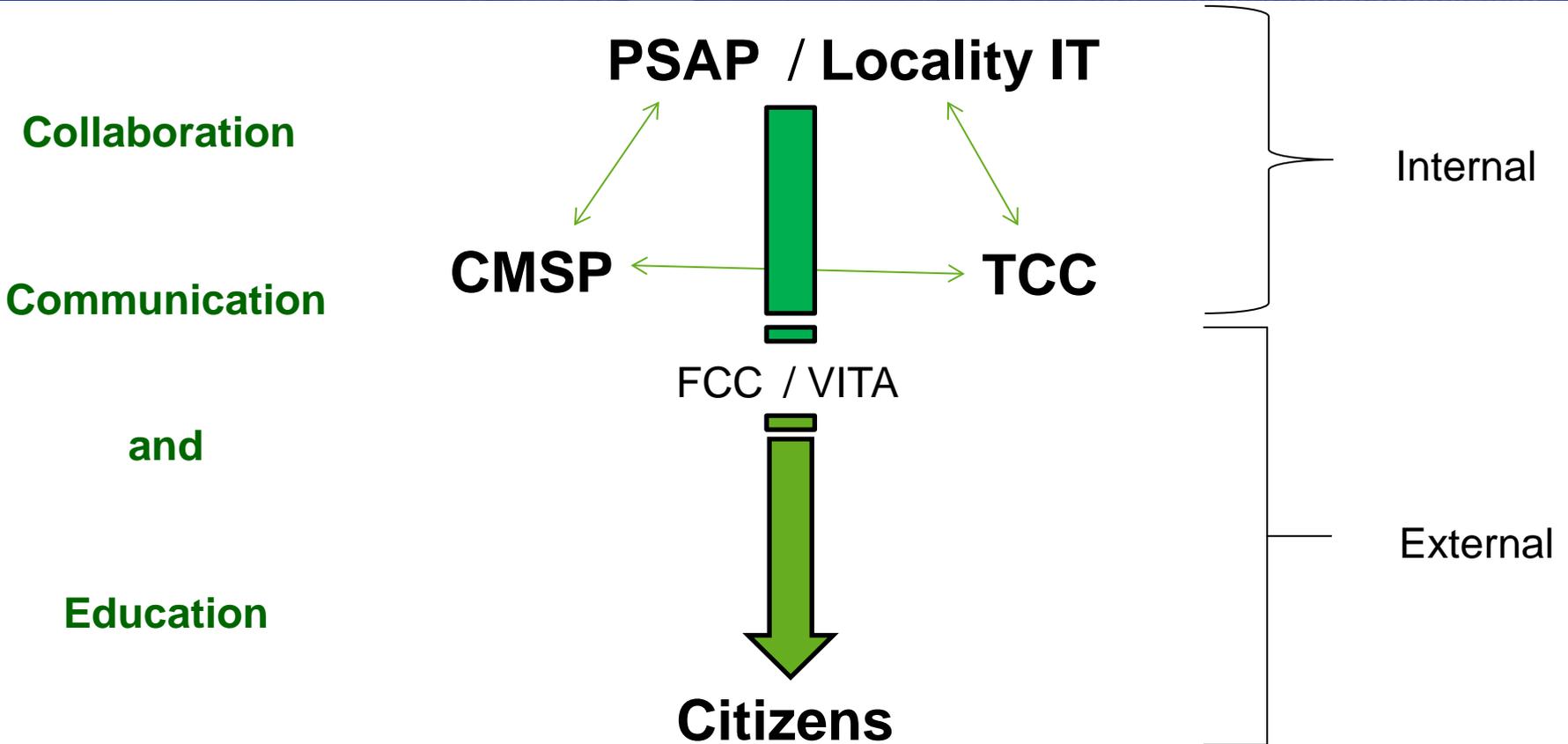
- PSAP will be collaborating and communicating mainly with
 - CMSP
 - TCC
 - Locality IT staff
- Important for everyone to work together and ask questions, as needed



Education

- Integral part of implementation
- More citizens embrace texting in everyday lives
- Deaf and hard of hearing & domestic violence organizations have been proactive in voicing need to have text-to-9-1-1 available
- Texting 9-1-1 should be used as a last resort.

Key Players





Goal

- SMS Text-to-9-1-1 Implementation Guide and Planning Kit:
 - To be a resource for Virginia's PSAPs to use to plan for and implement text-to-9-1-1



Additional Resources

- “Interim SMS Text-to-9-1-1 Information and Planning Guide,” APCO International. <http://www.apcointl.org/resources/next-generation-communications-systems/text-to-9-1-1.html>
- “Media & Public Questions and Answers About Text-to-9-1-1,” NENA. http://www.nena.org/resource/resmgr/docs/QA_on_Text_to_9-1-1_FINAL.docx
- “PSAP Text-to-9-1-1 Readiness and Certification Registry,” FCC. <http://www.fcc.gov/encyclopedia/psap-text-911-readiness-and-certification>
- “Second Report and Order and Third Further Notice of Proposed Rulemaking (FCC 14-118),” FCC. https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-118A1.pdf.



Additional Resources

- “Sending Text Messages to 911,” National 911 Program. <http://www.911.gov/911-issues/texting911.html>
- “SMS Text-to-9-1-1 Resources for PSAPs & 9-1-1 Authorities,” NENA. <http://www.nena.org/?page=textresources>